

LADDOMAT® 11-100

Manual and installation instructions

- Laddomat 11-100 raises the return temperature to the boiler bottom, which prevents corrosion through condensation and extends the service life of the boiler.
- Laddomat 11-100 enables the boiler to attain working temperature in a very short space of time. This improves boiler efficiency.
- Laddomat 11-100 charges the storage tank by means of a slow flow of hot water. A thin boundary layer* in the storage tank is necessary for an effective, easy-to operate boiler system. With Laddomat 11-100 layering is optimal.
- During the final part of firing, Laddomat 11-100 charges the storage tank fully, thanks to the unique thermal valve, which chokes the bypass port.
- Simple dimensioning - Laddomat 11-100 is suitable for use with any boiler with maximum output up to 120 kW.
- Laddomat 11-100 is supplied with shut off valves to facilitate any servicing without having to drain the system.
- EPP insulation is standard

Layering = A thin border between the hot water on top and the colder, denser water underneath.

Technical data

Thermostat cartridge: 53°, 57°, 63° 72°, 78°C or 83°C

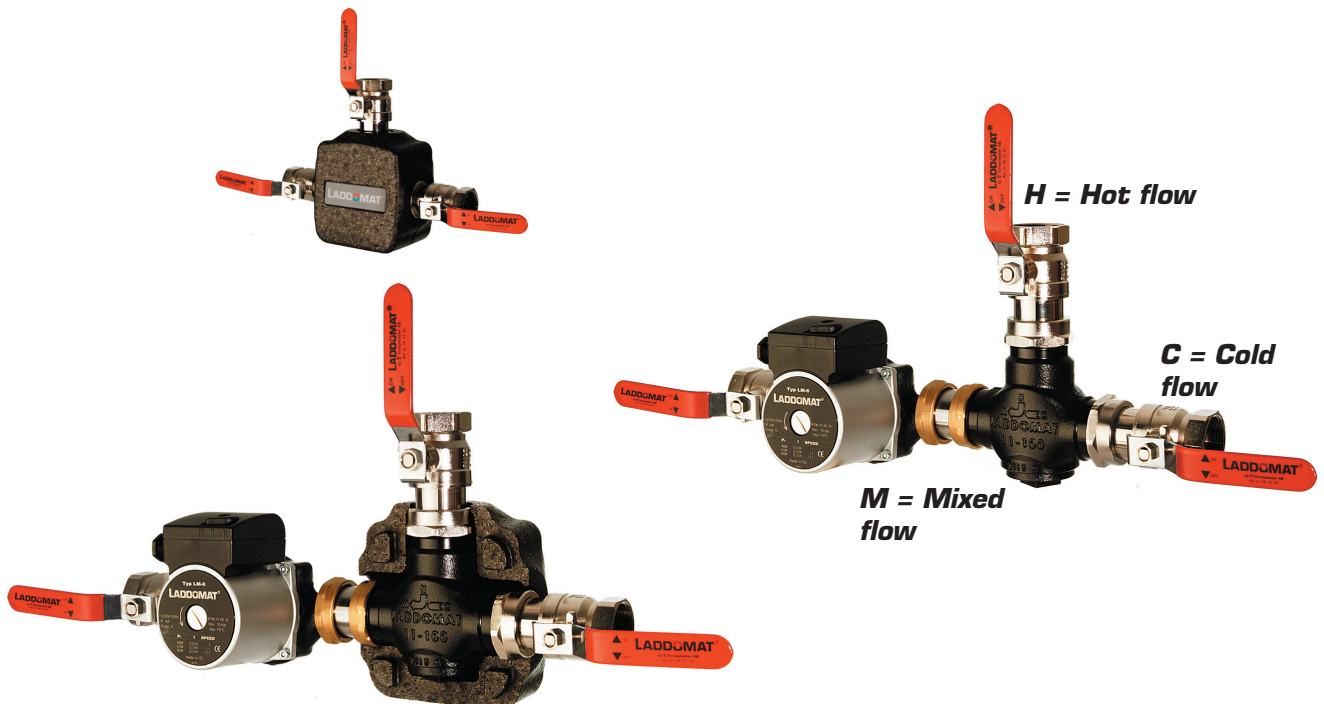
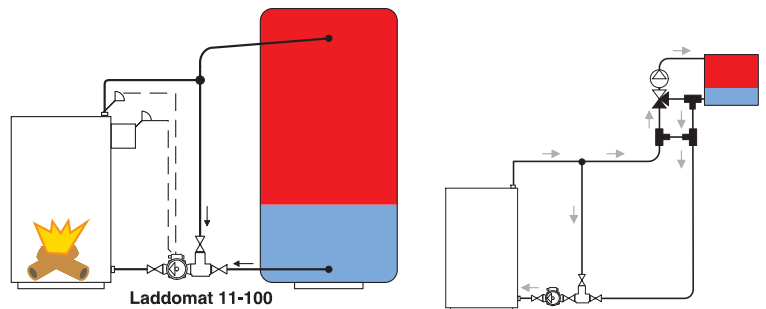
Pump: 4 m, < 35 kW
6 m, < 65 kW
7 m, < 120 kW

Connection: 3 x R32 with lever
3 x Cu28 with lever

Max. boiler output: **120 kW (see dimensioning)**

Pressure class: PN 6

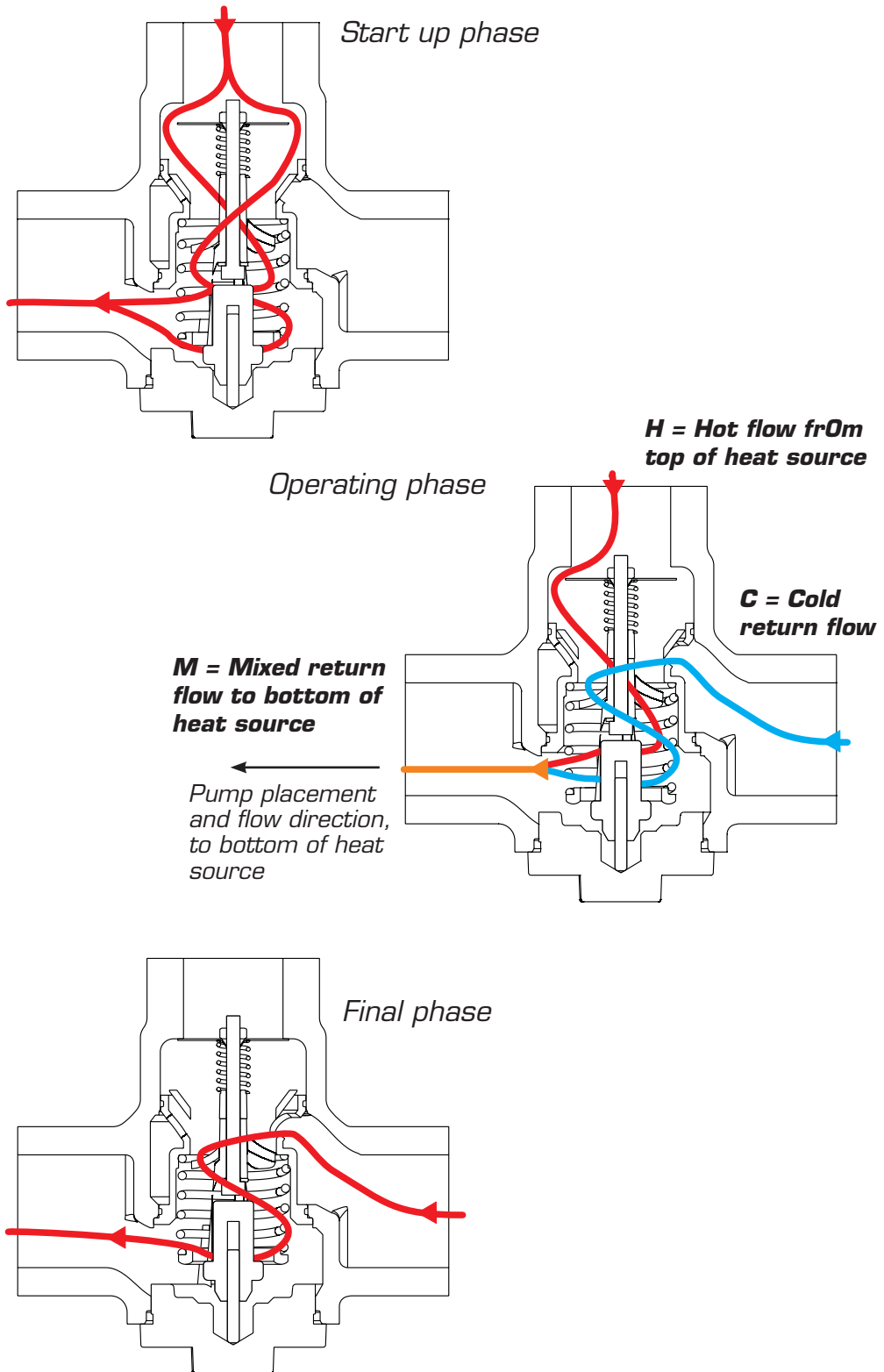
Max. temp: Max. +100°C
Min. +5°C



Function

Thermal layering

Thanks to its design and control features, the Laddomat 11-100 means optimal thermal layering in storage tanks, with a low and even charging flow. This layering system is beneficial as it increases storage capacity.

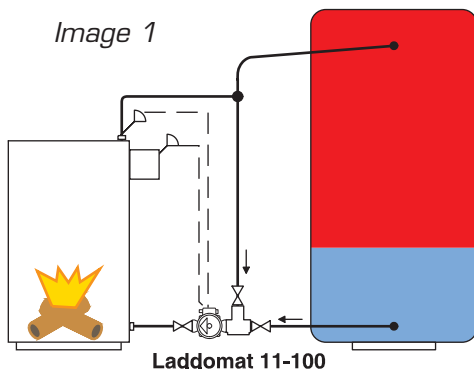


Dimensioning

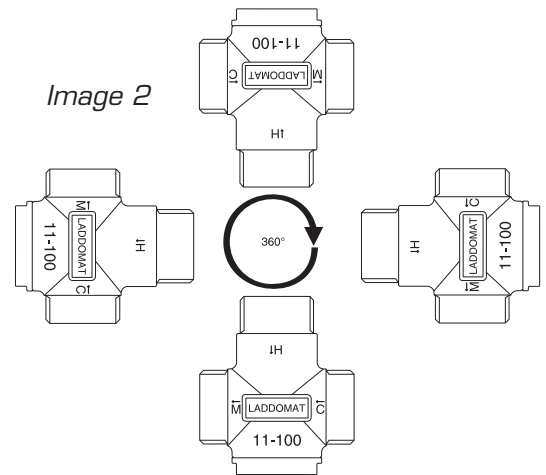
1. Highest suitable charge temp = (safety thermostat breaking temp - 5–10°C)
2. Minimum suitable inlet temp to boiler bottom (according to boiler manufacturer instructions)
3. Dt = Differential temperature between boiler inlet and outlet
4. Boiler output
5. $\text{Boiler output} / Dt = \text{Flow} \rightarrow (P \text{ kW} \times 1000) / (Dt \times 1.16) = Q \text{ l/h}$
Example: $(30 \text{ kW} \times 1000) / (20^\circ\text{C} \times 1.16) = 1293 \text{ l/h}$
6. Valve pressure drop + pipe system pressure drop (at relevant flow)
7. Pump according to relevant manufacturer's pump curve

$K_v \text{ value} = 14 \text{ m}^3/\text{h}$

Connection



Shut off valves are installed to facilitate servicing. Laddomat 11-100 should be placed low to avoid keeping the valve hot.



The installation position does not affect the function of the valve. The lines must be connected to the correct port on the valve.

Starting the pump

See image 3-6.

Speed 1 should not be used because the pump has a low starting torque at this speed, which can lead to the pump not being able to start.

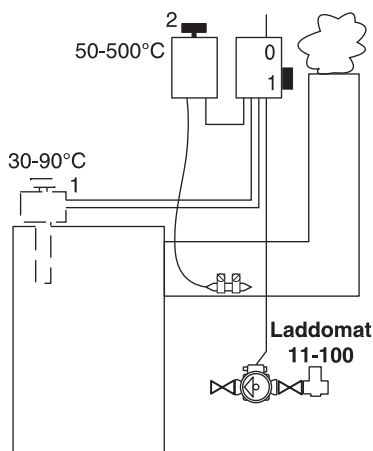


Image 3

Pump start alternative

On, for example, pellet burners the pump can be started and stopped at the same time as the burner.

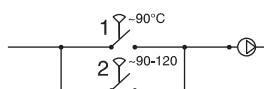


Image 5

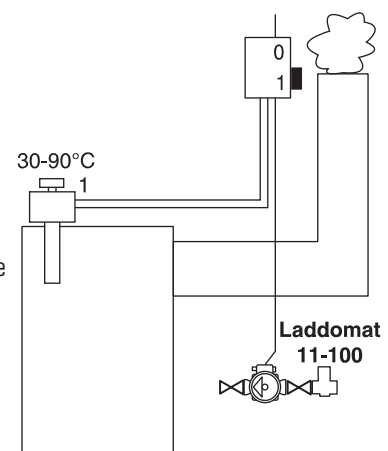


Image 4

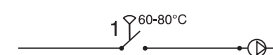


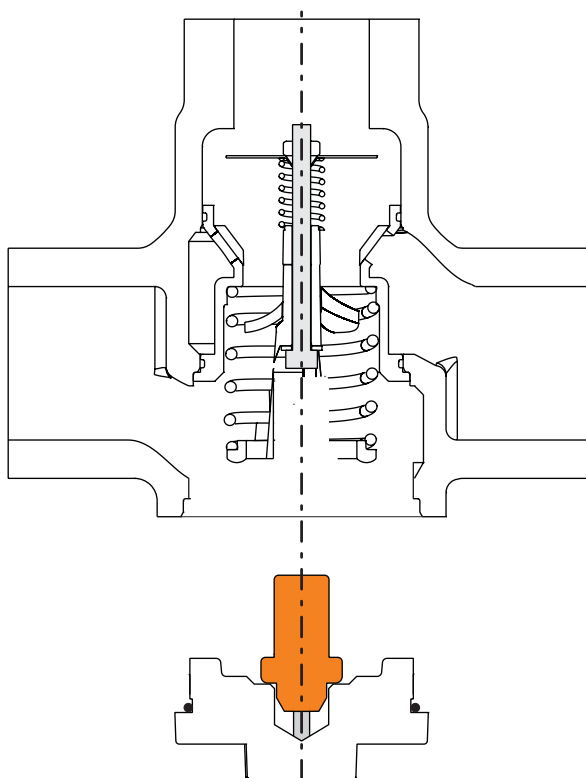
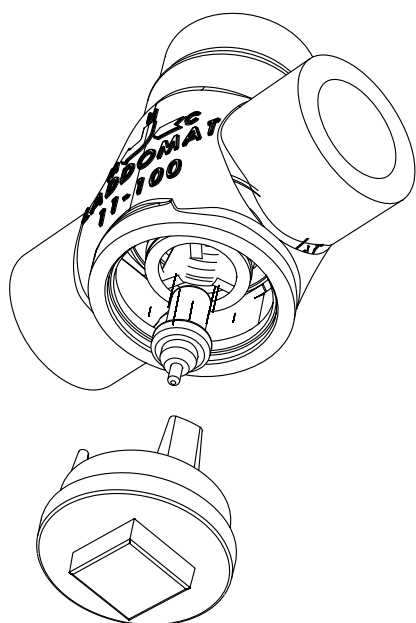
Image 6

Service

To replace the cartridge, see image.

Thermostat cartridges are available as a replacement part:

| Type | Opening temperature | Art. No. |
|------|---------------------|----------|
| 5840 | 53°C | 11 00 53 |
| 8749 | 57°C | 11 00 57 |
| 5839 | 63°C | 11 00 63 |
| 8719 | 72°C | 11 00 72 |
| 1456 | 78°C | 11 00 78 |
| 1467 | 83°C | 11 00 83 |



The cartridge is easily replaced by unscrewing the cap. The cartridge is loose in the cap and comes out with it (when installing with cap down).